REPORT
OF THE
1999 ANNUAL INVENTORY
OF MAINE'S FORESTS

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and
Forest Policy & Management Division

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Report of the 1999 Annual Inventory of Maine's Forests

Executive Summary

The USDA Forest Service, in partnership with the Maine Forest Service, began a new annual forest inventory in 1999. The new inventory system measures a 20% statewide sample of Maine's forests every year. Field work began in 1999; the full 100% sample will be completed in 2003. This first interim annual report is based on data from 646 plots.

The first year data provides a limited snapshot of estimates of forest land area and inventory. Growth data, and data to conduct long term trend analysis will not be available for at least a couple more years. The inventory data *is* strong enough to provide the following estimates:

- In 1999, Maine's forests had an estimated inventory of 282 million cords of wood (trees of pulpwood quality or better). This is an increase from the 1995 inventory.

- The average volume per acre in 1999 (trees of pulpwood quality or better) is estimated at 16.3 cords per acre. This is an increase since 1995.

- There is no significant change in volume since 1995 in any species or species group.

- There is no significant change since 1995 in the volume of wood suitable for use by sawmills.

- 94% of softwood trees 5.0" diameter or larger, and 84% of hardwood trees 5.0" diameter or larger are sawlog quality trees.

- 87% of the timberland area is in desirable stocking classes (moderately stocked and fully stocked), essentially unchanged from 1995. Overstocked stands make up 6%, and poorly stocked stands make up 7% of timberland area.

- Maine remains 90% forested, and 97% of the forest land is productive timberland.

MAINE FOREST SERVICE
MAINE'S 1999 ANNUAL INVENTORY REPORT

INTRODUCTION

The USDA Forest Service - Forest Inventory and Analysis, has been the major source of state-level forest inventory information across the U.S. The program provides periodic information on a variety of parameters describing forests and forest use: area and type of forest; species, size, and health of trees; and rates of tree growth, mortality, and removals.

The USDA Forest Service conducted four forest inventories in Maine (1954-58, 1968-1970, 1980-1982, and 1994-1996). These efforts have been augmented by additional inventory efforts to address specific issues. Despite this level of monitoring, Maine has faced contentious debates concerning sustainable forest management over the past decade. Until publication of new forest inventory information in 1996, the most current inventory data that was available was collected in 1980-1982. The long period between inventories has not served Maine's policy discussions well, and contributed to a high degree of uncertainty about the state of the forest resource.

In response to customer needs, the USDA Forest Service - Forest Inventory and Analysis has a new Congressional mandate (Public Law 105-185, The Agricultural Research, Extension, and Education Reform Act of 1998) to change the way they conduct forest inventories nationwide, including:

1. Change from a periodic to an annual forest inventory which measures 20% of all inventory plots in each state each year;
2. Development of consistency in the program across all forest lands;
3. Produce complete state reports at five year intervals.

The 118th Maine Legislature authorized the Maine Forest Service to participate with the USDA Forest Service to implement an annual forest inventory (PL 1997 C.720). Maine is the first state in the Northeast to participate in this new inventory process, and is the first state in the nation to convert to the new national core variables. The annual inventory measures 20% of the inventory plots every year. When the 1999 plots are completely remeasured in the sixth inventory year (2004), Maine will begin the process of a continuous annual inventory system consisting of the most recent five years of inventory data.

Field work under the new inventory system began in April 1999, and will be completed over a five year period. 646 plots were measured in 1999. Plots are located systematically across the state on all types of ownerships. As required by law, landowners are contacted by the USDA Forest Service for permission to access the plots. The exact locations of the plots are known only to the USDA Forest Service.

Although the USDA Forest Service is postponing reporting and analysis of inventory data until the full five year cycle is complete, the Maine Forest Service will produce interim annual reports. This report provides estimates of forest area; number, species, and size of trees; and volume based on the first year's data.

LIMITATIONS ON USING FIRST YEAR DATA

The annual inventory is designed to measure 20% (one-fifth) of the inventory plots every year. Estimates of forest characteristics can be derived from each annual measurement; however, the relatively small annual sample size, by itself, yields estimates with lower precision than an inventory that measures all plots in a short period (the periodic inventory). Until the full five year cycle is completed, the annual inventory may yield information that although is statistically valid, may fluctuate from year to year and cause concern or lack of confidence in some users. (1998, A. Gillespie. "Pros and Cons of Continuous Forest Inventory: Customer Perspectives." Presented at the "Integrated Tools for Natural Resources Inventories in the 21st Century" Conference, Augusts 16-19, 1998, Boise, Idaho.)

A more powerful approach to providing more precise estimates in the annual inventory is to use a moving average, combining the latest data with all previous years' data. The reliability of estimates using a moving average will improve as we progress through the first 5 year measurement cycle. The statewide report provided by the USDA Forest Service at the end of each five year measurement cycle will provide more precision than this single, annual report.

Data on forest area and inventory from the 1999 annual inventory are reported in the tables in Appendix A. The tables correspond with the same numbered tables in the 1995 inventory report "Forest Statistics of Maine, 1995."

The 1999 acreage and inventory estimates are compared to the 1995 estimates using the 95% confidence limit as a statistical test of the estimated means. The 95% confidence limit is expressed as a range around the mean. If the ranges for the two means do not overlap, we are 95% certain that there is a statistically significant difference between the means. Statistically significant differences are noted where they occur in the appendix tables.

Comparisons for significant differences between 1999 and 1995 data for some characteristics can not be made, due to changes in definitions or algorithms used by the USDA Forest Service to compile the data. (See footnote in Appendix A. Table 2.)

Due to the small sample size of this first annual inventory, and as recommended by the USDA Forest Service - Forest Inventory and Analysis unit, county level estimates are not reported here. Also, some species level data has been aggregated to species groups.

The first year inventory data provides a valid snapshot of inventory in 1999. The small sample size does not support a valid estimate of growth, nor does it allow meaningful trend analysis. The data necessary for growth estimates will not be available for at least two more years.

RESULTS & DISCUSSION

TIMBERLAND AREA

- **The 1999 inventory shows that forest land area and timberland area are stable.** (Appendix A. Table 1. Current land area by major land class.)
  The 1999 inventory is based on the 1995 land use sampling scheme. The 1995 inventory used a two stage sampling method to estimate land classes. Over 75,000 aerial photo-points were interpreted and classified by current land class. The second phase sampled 3,000 ground plots for current land use. This two stage sampling estimated a total of 19,755,340 acres of all land classes in Maine, and 16,952,130 acres of timberland acres. Therefore, the 646 ground plots measured in 1999 sampled current land classes based on the 19.7 million land acres estimated in 1995.

- **The data indicates a possible decrease in Aspen/Birch forest type, and a possible increase in Oak/Pine, Maple/Beech/Birch and Elm/Ash/Red Maple forest type groups since 1995.** (Appendix A. Table 2. Timberland area by forest type group and ownership class.)
  The observed changes are partly due to repeated changes made by the USDA Forest Service in the algorithms that calculate forest type. **Because of the change in algorithms, we are unable to determine how much of the change is a real on the ground change, and how much is due to the new algorithms.** The Maine Forest Service will re-examine these reported changes in forest types, pending recalculation of 1995 data with the current national algorithms.

  Maple/Beech/Birch is the most common forest type group, covering 6.5 million acres, followed by Spruce/Fir with 5.4 million acres. These two forest types represent 69% of timberland acres. This is the same relative ranking as in 1995, when the two forest types accounted for 73% of timberland acres.

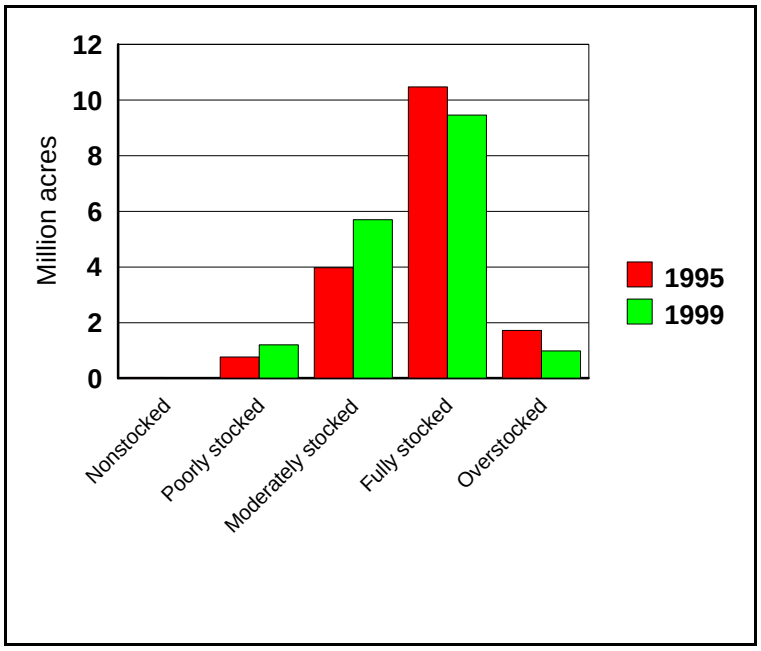
- **Timberland acres are fairly evenly distributed among three stand sizes: large and medium diameter stands each make up 37% (6.4 million acres each) of timberland area. Small diameter stands make up 26% (4.5 million acres) of timberland area.** (Appendix A. Table 3. Timberland area by stand-size class and ownership class.) Timberland acres in the large diameter stand class increased 12% (699,000 acres) since 1995.

- **For All Live Trees (trees 1.0" dbh or larger), 87% of the timberland acres are in desirable stocking classes: fully stocked stands make up 54% (9.5 million acres) and moderately stocked stands make up 33% (5.7 million acres) of timberland area. Overstocked stands make up 6% (1.0 million acres), and poorly stocked or non-stocked stands make up 7% (1.2 million acres) of timberland area.** (Appendix A. Table 10. Area of timberland by forest type group and stocking class of All Live Trees**.**)

- **For All Live Trees (trees 1.0” dbh or larger), the distribution of acres across stocking classes shows significant increases since 1995 in the poorly stocked, and moderately stocked classes, and significant decreases in the fully stocked and overstocked classes.**

- **In 1999, 87% of timberland acres (15.2 million acres) were in desirable stocking classes (moderately or fully stocked), essentially unchanged from 1995.** (Appendix A. Table. 10, and Figure 1.)

Figure 1. Distribution of Timberland area by Stocking Class of All Live Trees, 1995 and 1999.



- **There is a statistically significant increase in the acreage in the 0 to 49 sq.ft. basal area class since 1995. This basal area class now represents 3.2 million acres (18% of timberland acres).** There was no statistically significant change in the other four basal area classes. (Appendix A. Table 12. Area of timberland by forest type group and basal area class.)

  The significant shift in acres to a low basal area class, coupled with the magnitude of this basal area class as a percentage of all timberland acres, prompted an analysis to examine what, if any, patterns can be found in the distribution of stocking classes and stand size class among landowner types. (Figure 2.)

Figure 2. Timberland acres in the 0-49 sq.ft. basal area class by ownership class, stand size class, and stocking class.

	Percent of acres in the 0-49 sq.ft. basal area class							
	Ownership Class							
Stand Size Class and Stocking Class	Public		Forest Industry		Nonindustrial Private		Subtotal of stocking class	
Small Diameter Stands								
Nonstocked & poorly stocked	0.00%		2.76%		1.10%		3.86%	
Moderately stocked	0.96%		11.87%		10.26%		23.09% see #1 below	
Full stocked & overstocked	0.00%		33.04%		19.54%		52.58% see #1 below	
Subtotal of Small Diameter Stands	**0.96%**		**47.67%**		**30.90%**		**79.53%**	
Owner Class Share of Stand Size Class	**1.21%**			**59.94%**		**38.85%**		**100.00%**
Medium Diameter Stands								
Nonstocked & poorly stocked	0.72%		2.39%		6.09%		9.20%	
Moderately stocked	0.00%		1.91%		1.67%		3.58%	
Full stocked & overstocked	0.00%		0.24%		0.94%		1.18%	
Subtotal of Medium Diameter Stands	**0.72%**		**4.54%**		**8.71%**		**13.96%**	
Owner Class Share of Stand Size Class	**5.13%**			**32.52%**		**62.35%**		**100.00%**
Large Diameter Stands								
Nonstocked & poorly stocked	0.00%		1.91%		2.87%		4.78% see #3 below	
Moderately stocked	0.00%		1.19%		0.32%		1.51%	
Full stocked & overstocked	0.00%		0.00%		0.21%		0.21%	
Subtotal of Large Diameter Stands	**0.00%**		**3.11%**		**3.40%**		**6.50%**	
Owner Class Share of Stand Size Class	**0.00%**			**47.76%**		**52.24%**		**100.00%**
Ownership share of 0 - 49 sq. ft. basal area class	1.68%		55.32% see #2 below		43.00%		100.00%	
Ownership share of 17. 3 million timberland acres		5%		42%		53%		

1. 76% of the acres in the 0 to 49 sq.ft. basal area class are in the Small Diameter Stand Size Class (stands with >50% stocking with trees 1.0" to 4.9" dbh), and are in desirable stocking classes (moderately stocked or fully and overstocked).
2. The forest industry ownership class has significantly more of this basal area class than public or nonindustrial private owners. The management of these low basal area stands will play an important role in the development of Maine's future forests. *(Forest Industry Land is land owned by companies or individuals that operate wood-using plants. Non-Industrial Private Land is land owned by companies, non-governmental organizations, or individuals that do not operate wood-using plants.)*
3. Only 5% of the acres occur in large diameter stands with poor stocking, and they occur equally on forest industry and nonindustrial private ownerships.

NUMBER OF TREES

The USDA Forest Service recommends aggregating some of the individual species into species groups when reporting data on number trees and volume, in order to overcome the limitations of small sample size.

For purposes of this report, species were aggregated to the following species groups:

Species Group	Species
Balsam fir	Balsam fir
Spruces	White, black, and red spruce
White Pine	Eastern white pine
Northern White Cedar	Northern white cedar
Other Misc. Softwoods	Red pine, larch, hemlock, and all other softwoods measured
Red maple	Red maple
Sugar Maple/Beech/Birch	Sugar maple, American beech, Yellow birch
Intolerant hardwoods	White birch and aspen/poplar
Other Misc. Commercial hardwoods	White oak, red oak, White ash, Black ash, basswood, elm, and all other commercial hardwood measured
Noncommercial hardwoods	Gray birch and all other noncommercial hardwoods

For trees 5.0" dbh or larger, the 1999 inventory shows:

- **The most abundant live commercial tree species groups are (in decreasing order of abundance) spruces, sugar maple/beech/yellow birch, balsam fir, red maple, and northern white cedar.** (Appendix A. Table 13. Number of trees (5.0" dbh or larger) by species/species group and tree class.)

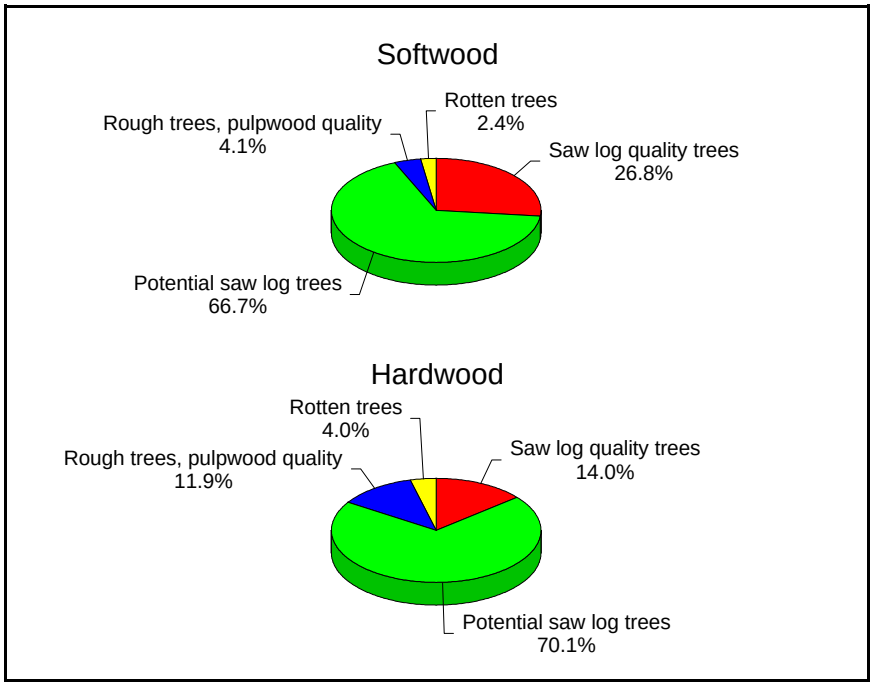
- **No significant change in the number of Growing Stock trees in any species, except red maple, which decreased 19%. This contributes to a 13% decrease in the number of growing stock trees at the All Species level.** (Appendix A. Table 14. Number of growing stock trees (5.0" dbh or larger) by species/species group and diameter class.)

- **85% of the decrease in the number of Growing Stock trees, all species, occurs in the Poletimber size class (6", 8" diameter classes in softwood species, and 6", 8", 10" diameter classes in hardwood species), and 58% of that decrease occurred in the hardwood component. Only 15% of the reduction in number of growing stock trees occurs in sawtimber trees.** (Appendix A. Table 14.)

- **Tree Quality**: **94% of live merchantable size softwood trees are either sawtimber or potential sawtimber trees. 84% of live merchantable size hardwood trees are either sawtimber or potential sawtimber trees.** (Appendix A. Tables 13 and 14, and Figure 3.)

- **Tree Quality**: **98% of live merchantable size softwood trees (**5.0" diameter or larger) **are Pulpwood Quality or Better. 96% of live merchantable size hardwood trees are Pulpwood Quality or Better.** (Appendix A. Tables 13 and 14 and Figure 3.)

Figure 3. Distribution of live merchantable size softwood and hardwood trees by Tree Class, 1999.



For all live trees 1.0" dbh or larger, the 1999 inventory shows:
(Testing for significant differences is not possible because the 1995 sampling errors for Table 16. are not available.)

- **The most abundant commercial tree species groups are (in decreasing order of abundance) balsam fir, sugar maple/beech/yellow birch, spruces, red maple, and intolerant hardwoods.** (Appendix A. Table 16. Number of live trees (1.0" dbh or larger) by species/species group and diameter class.)

- **The largest increases in the number of live trees are in balsam fir and the spruces.** (Appendix A. Table 16.)

- **The largest decreases in the number of live trees are in intolerant hardwoods, other miscellaneous commercial hardwoods, and red maple.** (Table 16.)

- **A 12% increase in the number of all softwood trees and an 8% decrease in the number of all hardwood trees. These dynamics occur primarily in the Sapling diameter class** (trees 1.0" to 4.9" dbh)**.** (Appendix A. Table 16.)

VOLUME

- **The 1999 Growing Stock volume is estimated at 22,800 million cubic feet. This is not significantly different from the 1995 estimate of 20,823 million cubic feet.** (Appendix A. Table 19. Net volume of growing stock trees by species/species group and diameter class.)

- **The 1999 volume of Pulpwood Quality Trees or Better is estimated at 23,994 million cubic feet (282 million cords). This is a significant increase (11%) in volume from the 1995 estimate of 21,597 million cubic feet (254 million cords).** (Appendix A. Table 23. and Appendix B. Figure 2.)

- **The average volume per acre in 1999, Pulpwood Quality Trees or Better, is estimated at 16.26 cords per acre**. (Appendix B. Figure 1.) This is an increase since 1995.

- **Between 1995 and 1999 there is:**
  - **No significant differences in Growing Stock volume for individual species groups.** (Appendix A. Table 19.)
  - **No significant decrease in Growing Stock volume in any diameter class.** (Appendix A. Table 19.)
  - **Small but significant increases in Growing Stock volume in the Large sawtimber diameter classes (trees 15.0" dbh or larger).** (Appendix A. Table 19.)
  - **No significant change in volume of Sawtimber Trees, All Species.** (Appendix A. Table 23. Net volume of all live trees, commercial tree species, pulpwood quality, growing stock, and sawtimber trees by species/species group and ownership class.)
  - **A significant increase (11%) in volume of All Live Trees (All Species), and the volume of Commercial tree species (All Species).** (Appendix A. Table 23.)

GROWTH

The first year data provides a valid snapshot of inventory in 1999. The small sample size does not support a valid estimate of growth since the 1995 inventory. Growth data will not be available until after the fifth year of inventory measurements are completed in 2003.

Glossary of
Inventory Terminology

Acceptable Tree - A tree with 1/3 or more of the gross board-foot volume of the entire sawlog section from logs that meet minimum size, grade and soundness requirements. If poletimber size, the tree must have the potential to meet these requirements when it becomes sawlog size.

Accessible Timberland - Forest land that field crews have permission to visit and that can be accessed safely. This is the true population of interest for FIA inventory purposes.

Forest Land - Land at least 10 percent stocked by forest trees of any size, or land that formerly had such tree cover and is not currently developed for a non forest use.

Growing Stock Tree - All live trees that meet the standard for an Acceptable Tree or a Preferred Tree.

Owner Class - A variable that classifies land into finer categories of ownership.

Forest Industry Land - Land owned by companies or individuals that operate wood-using plants.

Non-Industrial Private - Land owned by companies, non-governmental organizations, or individuals that do not operate wood-using plants.

Public - Land owned by federal, state, municipal, or county government.

Preferred Tree - A high quality tree, from a lumber viewpoint, that would be favored in cultural operations. General characteristics include grade 1 butt log (if sawtimber size), good form, good vigor, and freedom from serious damage.

Poletimber Tree - a tree that is at least 5.0" dbh, but smaller than sawtimber size trees. For softwood species, trees that are 5.0" to 8.9" dbh; for hardwood species, trees that are 5.0" to 10.9" dbh.

Pulpwood Quality Tree - a tree that is field coded as a growing stock tree or rough cull tree.

Rough Cull Tree - A live tree with less than 1/3 of its gross board foot volume in logs that meet size, soundness and grade requirements, and more than ½ of the board foot cull is due to sound defects such as sweep, crook, etc. Or, a live poletimber size that prospectively will have less than 1/3 of its gross board foot volume in logs that meet size, soundness and grade requirements, and more than ½ of the board foot cull is due to sound defects such as sweep, crook, etc.

Sapling Tree - Live trees 1.0" to 4.9" dbh.

Sawtimber Tree - Softwood trees that are at least 9.0" dbh, or hardwood trees that are at least 11.0" dbh that contain at least one 12 foot log, or two non-contiguous 8 foot logs, that meet minimum sawlog grade specifications. In addition, the tree must have 1/3 or more of its gross board foot volume as merchantable material.

Species Groups - as used in the Appendix Tables and in the report, species groups include the following species:

Group
Balsam Fir - Balsam Fir
Spruces - White Spruce, Red Spruce, Black Spruce
Eastern White Pine - Eastern White Pine
Northern White Cedar - Northern White Cedar
Other Miscellaneous Softwoods - these species were tallied in 1999:
Tamarack, Norway Spruce, Red Pine, Pitch Pine, Scotch Pine, Hemlock
Red Maple - Red Maple
Sugar Maple/Beech/Yellow Birch - Sugar Maple, American Beech, Yellow Birch
Intolerant Hardwoods - Paper Birch, Balsam Poplar, Eastern Cottonwood, Bigtooth Aspen, Quaking Aspen
Other Miscellaneous Commercial Hardwoods - these species were tallied in 1999:
Sweet Birch, White Ash, Black Ash, Green Ash, Black Cherry, White Oak, Northern Red Oak, Scarlet Oak, Black Oak, American Elm, American Basswood, Ohio Buckeye
Noncommercial Hardwoods - these species were tallied in 1999:
Gray Birch, Striped Maple, Mountain Maple, Serviceberry, Apple spp., American Hornbeam, Pin Cherry, Chokecherry, Eastern Hophornbeam, Willow spp., American Mountain Ash, Unknown/Not listed

Stand Size - A stand descriptor that indicates which size-class of trees constitutes the plurality of stocking in the stand. This variable is field assigned, and then calculated as part of the data validation process. The calculated value is used to assign stand size classes in this analysis.

Large Diameter Stand Size Class is comprised of:
- ≥ 10% stocking of trees of any size
- > 50% stocking of trees with diameters ≥5.0"
- Stocking of large diameter trees exceeds the stocking of medium diameter trees

Medium Diameter Stand Size Class is comprised of:
- ≥10% stocking of trees of any size
- >50% stocking of trees with diameters ≥5.0"
- The stocking of medium diameter trees exceeds the stocking of large diameter trees

Small Diameter Stand Size Class is comprised of:
- ≥10% stocking of trees of any size
- > 50% stocking of trees with diameters < 5.0"

Nonstocked Stand Size Class is comprised of:
- < 10% stocking of trees of any size

Small Diameter Trees - Trees 1.0" dbh or larger, and smaller than 5.0" dbh.
Medium Diameter Trees - For softwood species, trees 5.0" to 8.9" dbh.
For hardwood species, trees 5.0" to 10.9" dbh.

Large Diameter Trees - For softwood species, trees 9.0" dbh or larger.
For hardwood species, trees 11.0" dbh or larger.

Stocking - The relative degree of occupancy of land by trees, measured as basal area or the number of trees in a stand by size or age and spacing, compared to the basal area or number of trees required to fully utilize the growth potential of the land; that is, the stocking standard.

This variable is field assigned. In the data validation process a national algorithm is used to calculate this variable. The calculated value is used in this report.

The 5 stocking classes are:

Nonstocked	< 10% stocking
Poorly Stocked	≥ 10% and < 35% stocking
Moderately Stocked	≥ 35% and < 60% stocking
Fully Stocked	≥ 60% and ≤ 100% stocking
Overstocked	> 100% stocking

Timberland - Defines a subset of forest land. This is forest land that is producing, or is capable of producing, crops of industrial wood and is not withdrawn from timber utilization by statute (Acadia National Park, Appalachian Trail Corridor) or administrative designation (Baxter State Park). Areas qualifying as timberland have the capability of producing in excess of 20 cubic feet per acre per year of industrial wood under management.

APPENDIX A.

Table 1: Current Land Area by Major Land Class, Maine, 1999
(in acres)

Land Class	1999 Estimate	Net Change in Acreage in the 1999 Estimate	1995 Estimate
Timberland	17,357,088	404,958	16,952,130
Other Forest Land	479,587	(269,613)	749,200
Total Forest Land	17,836,675	135,345	17,701,330
Total Farm Land	814,736	(23,524)	838,260
Total Other Non Forest Land	1,016,745	(173,445)	1,190,190
Total Hazardous Area	22,936	22,936	-
Noncensus Water	64,248	38,688	25,560
Grand Total, All Land Classes	**19,755,340**	-	**19,755,340**

Table 2: Area of Timberland by Forest Type Group and Ownership Class, Maine, 1999
(In Thousands of acres, using revised 1995 Classification Algorithms)

Forest Type Group	Ownership Class: Public Ownership	Ownership Class: Forest Industry	Ownership Class: Non-Industrial Private	Forest Type Group Total	1999 Estimate's 95% C.I.	[1]	1995 Estimate's Total	1995 Estimate's 95% C.I.
White/Red/Jack Pine	48.3	272.8	882.6	1,203.6	1,074 - 1,333	**N/A**	1,173.0	1,009 - 1,337
Spruce/Fir	168.2	2,770.1	2,454.1	5,392.4	5,152 - 5,632	**N/A**	5,483.8	5,199 - 5,769
Loblolly/Shortleaf	-	-	-	-		**N/A**	6.7	0 - 20
Oak/Pine	84.1	-	497.1	581.2	487 - 675	**N/A**	189.2	119 - 259
Oak/Hickory	15.3	53.5	583.6	652.4	587 - 718	**N/A**	262.4	179 - 345
Elm/Ash/Red Maple	30.6	183.5	462.4	676.5	606 - 747	**N/A**	404.7	299 - 510
Maple/Beech/Birch	344.0	3,018.8	3,163.0	6,525.8	6,292 - 6,760	**N/A**	6,907.3	6,603 - 7,211
Aspen/Birch	152.9	994.6	1,177.8	2,325.2	2,159 - 2,491	**N/A**	2,525.0	2,293 - 2,757
Total - Ownership Class	843.4	7,293.2	9,220.5	17,357.1				
95% Confidence Interval	747 - 940	7,057 - 7,529	8,890 - 9,551	16,936 - 17,778				
Significantly Different at the 95% Confidence Interval								
Total - 1995 - Ownership Class	631.3	7,298.4	9,022.4	16,952.1				
1995 Estimate's 95% Confidence Interval	478 - 784	6,992 - 7,605	8,716 - 9,329	16,817 - 17,088				

[1] The determination of forest type group for the 1999 data uses both of the new stocking and stand size algorithms, and therefore has no correspondence to the algorithms and methods used in classifying this variable in 1995. The USFS will eventually provide a restatement of the 1995 data based on the current algorithms Pending that revision the testing of statistical differences, by forest type group, is suspended for this Table.

Department of Conservation

Maine Forest Service

Data Source:
USDA Forest Service
Forest Inventory and Analysis - Northeastern Research Station

10/26/00

Table 3: Area of Timberland by Stand Size Class and Ownership Class, Maine, 1999
(In Thousands of acres, using revised 1995 Classification Algorithms)

Stand Size Class	Ownership Class			Stand Size Class Total	1999 Estimate's 95% C.I.	Significantly Different at the 95% Confidence Interval	1995 Estimate's Total	1995 Estimate's 95% C.I.
	Public Ownership	Forest Industry	Non-Industrial Private					
Large Diameter	545.2	2,652.7	3,215.9	6,413.7	6,179 - 6,649	***** Increase**	5,714.7	5,406 - 6,023
Medium Diameter	267.4	2,367.7	3,788.7	6,423.7	6,147 - 6,701		6,746.3	6,436 - 7,057
Small Diameter	30.8	2,265.3	2,215.9	4,512.0	4,306 - 4,718		4,472.7	4,213 - 4,732
Nonstocked	-	7.6	-	7.6			18.4	0 - 38
Total - Ownership Class	843.4	7,293.2	9,220.5	17,357.1				
95% Confidence Interval	747 - 940	7,057 - 7,529	8,890 - 9,551	16,936 - 17,778				
Significantly Different at the 95% Confidence Interval								
Total - 1995 - Ownership Class	631.3	7,298.4	9,022.4	16,952.1				
1995 Estimate's 95% Confidence Interval	478 - 784	6,992 - 7,605	8,716 - 9,329	16,817 - 17,088				

Table 4: Area of Timberland by Stocking Class of Growing Stock Trees and Ownership Class, Maine, 1999
(In Thousands of acres, using revised 1995 Classification Algorithms)

Stocking Class	Ownership Class			Stocking Class Total	1999 Estimate's 95% C.I.	Significantly Different at the 95% Confidence Interval	1995 Estimate's Total	1995 Estimate's 95% C.I.
	Public Ownership	Forest Industry	Non-Industrial Private					
Nonstocked	-	7.6	67.2	74.9	34 - 115		47.0	14 - 80
Poorly Stocked	30.6	896.1	1,148.2	2,074.9	1,964 - 2,186	***** Increase**	1,236.5	1,066 - 1,407
Moderately Stocked	336.6	2,778.0	3,862.1	6,976.7	6,770 - 7,183	***** Increase**	5,172.7	4,862 - 5,483
Fully Stocked	476.2	3,347.7	3,935.9	7,759.8	7,462 - 8,057	***** Decrease**	9,582.7	9,257 - 9,909
Overstocked	-	263.7	207.1	470.8	356 - 585	***** Decrease**	913.2	769 - 1,057
Total - Ownership Class	843.4	7,293.2	9,220.5	17,357.1				
95% Confidence Interval	747 - 940	7,057 - 7,529	8,890 - 9,551	16,936 - 17,778				
Significantly Different at the 95% Confidence Interval								
Total - 1995 - Ownership Class	631.3	7,298.4	9,022.4	16,952.1				
1995 Estimate's 95% Confidence Interval	478 - 784	6,992 - 7,605	8,716 - 9,329	16,817 - 17,088				

Table 6: Area of Timberland by Forest Type Group and Stand Size Class Maine, 1999
(In Thousands of acres, using revised 1995 Classification Algorithms)

Forest Type Group	Stand Size Class: Large Diameter	Medium Diameter	Small Diameter	Non Stocked	Forest Type Group Total	1999 Estimate's 95% C.I.	[1]	1995 Estimate's Total	1995 Estimate's 95% C.I.
White/Red/Jack Pine Group	896.9	276.2	30.6	-	1,203.6	1,074 - 1,333	**N/A**	1,173.0	1,009 - 1,337
Spruce/Fir Group	2,078.2	1,562.0	1,744.5	7.6	5,392.4	5,152 - 5,632	**N/A**	5,483.8	5,199 - 5,769
Loblolly/Shortleaf	-	-	-	-	-		**N/A**	6.7	0 - 20
Oak/Pine Group	269.1	250.9	61.2	-	581.2	487 - 675	**N/A**	189.2	119 - 259
Oak/Hickory Group	186.0	435.8	30.6	-	652.4	587 - 718	**N/A**	262.4	179 - 345
Elm/Ash/Red Maple Group	193.7	131.1	351.7	-	676.5	606 - 747	**N/A**	404.7	299 - 510
Maple/Beech/Birch Group	2,619.5	2,729.8	1,176.6	-	6,525.8	6,292 - 6,760	**N/A**	6,907.3	6114 - 6704
Aspen/Birch Group	170.4	1,038.0	1,116.9	-	2,325.2	2,159 - 2,491	**N/A**	2,525.0	2025 - 2475
Total - All Forest Types	6,413.7	6,423.7	4,512.0	7.6	17,357.1				
95% Confidence Interval	6,179 - 6,649	6,147 - 6,701	4,306 - 4,718		16,936 - 17,778				
Significantly Different at the 95% Confidence Interval	***** Increase**								
Total - 1995 - Stand Size Class	5,714.7	6,746.3	4,472.7	18.4	16,952.1				
1995 Estimate's 95% Confidence Interval	5,406 - 6,023	6,436 - 7,057	4,213 - 4,732	0 - 38	16,817 - 17,088				

[1] The determination of forest type group for the 1999 data uses both of the new stocking and stand size algorithms, and therefore has no correspondence to the algorithms and methods used in classifying this variable in 1995. The USFS will eventually provide a restatement of the 1995 data based on the current algorithms Pending that revision the testing of statistical differences, by forest type group, is suspended for this Table.

Table 8: Area of Timberland by Forest Type Group and Stocking Class of Growing Stock Trees, Maine, 1999
(In Thousands of acres, using revised 1995 Classification Algorithms)

Forest Type Group	Stocking Class					Forest Type Group Total	1999 Estimate's 95% C.I.	[1]	1995 Estimate's Total	1995 Estimate's 95% C.I.
	Non-Stocked	Poorly Stocked	Moderately Stocked	Fully Stocked	Over-Stocked					
White/Red/Jack Pine	-	143.3	372.3	618.5	69.5	1,203.6	1,074 - 1,333	**N/A**	1,173.0	1,009 - 1,337
Spruce/Fir	21.3	685.4	2,329.3	2,198.0	158.3	5,392.4	5,152 - 5,632	**N/A**	5,483.8	5,199 - 5,769
Loblolly/Shortleaf	-	-	-	-	-	-		**N/A**	6.7	0 - 20
Oak/Pine	-	61.2	315.5	181.6	22.9	581.2	487 - 675	**N/A**	189.2	119 - 259
Oak/Hickory	-	91.7	216.6	344.0	-	652.4	587 - 718	**N/A**	262.4	179 - 345
Elm/Ash/Red Maple	-	146.4	183.5	346.6	-	676.5	606 - 747	**N/A**	404.7	299 - 510
Maple/Beech/Birch	-	720.5	2,667.1	2,948.1	190.2	6,525.8	6,292 - 6,760	**N/A**	6,907.3	6,603 - 7,211
Aspen/Birch	53.5	226.3	892.5	1,123.0	29.9	2,325.2	2,159 - 2,491	**N/A**	2,525.0	2,293 - 2,757
Total - All Groups	74.9	2,074.9	6,976.7	7,759.8	470.8	17,357.1				
95% Confidence Interval	34 - 115	1,964 - 2,186	6,770 - 7,183	7,462 - 8,057	356 - 585	16,936 - 17,778				
Significantly Different at the 95% Confidence Interval		***** Increase**	***** Increase**	***** Decrease**	***** Decrease**					
Total - 1995 - Stocking Class	47.0	1,236.5	5,172.7	9,582.7	913.2	16,952.1				
1995 Estimate's 95% Confidence Interval	14 - 80	1,066 - 1,407	4,862 - 5,483	9,257 - 9,909	769 - 1,057	16,817 - 17,088				

[1] The determination of forest type group for the 1999 data uses both of the new stocking and stand size algorithms, and therefore has no correspondence to the algorithms and methods used in classifying this variable in 1995. The USFS will eventually provide a restatement of the 1995 data based on the current algorithms Pending that revision the testing of statistical differences, by forest type group, is suspended for this Table.

Table 10: Area of Timberland by Forest Type Group and Stocking Class of All Live Trees, Maine, 1999
(In Thousands of acres, using revised 1995 Classification Algorithms)

Forest Type Group	StockingClass					Forest Type Group Total	1999 Estimate's 95% C.I.	[1]	1995 Estimate's Total	1995 Estimate's 95% C.I.
	Non-Stocked	Poorly Stocked	Moderately Stocked	Fully Stocked	Over-Stocked					
White/Red/Jack Pine	-	89.6	375.0	629.0	110.1	1,203.6	1,074 - 1,333	**N/A**	1,173.0	1,009 - 1,337
Spruce/Fir	7.6	518.7	2,079.8	2,534.3	251.8	5,392.4	5,152 - 5,632	**N/A**	5,483.8	5,199 - 5,769
Loblolly/Shortleaf	-	-	-	-	-	-			6.7	0 - 20
Oak/Pine	-	30.6	268.0	236.8	45.8	581.2	487 - 675	**N/A**	189.2	119 - 259
Oak/Hickory	-	30.6	216.6	405.2	-	652.4	587 - 718	**N/A**	262.4	179 - 345
Elm/Ash/Red Maple	-	107.0	100.5	407.7	61.2	676.5	606 - 747	**N/A**	404.7	299 - 510
Maple/Beech/Birch	-	327.5	1,903.3	3,913.7	381.3	6,525.8	6,292 - 6,760	**N/A**	6,907.3	6114 - 6704
Aspen/Birch	-	104.0	762.2	1,330.6	128.4	2,325.2	2,159 - 2,491	**N/A**	2,525.0	2025 - 2475
Total - All Groups	7.6	1,208.0	5,705.4	9,457.4	978.6	17,357.1				
95% Confidence Interval		1,103 - 1,313	5,514 - 5,897	9,152 - 9,763	826 - 1,131	16,936 - 17,778				
Significantly Different at the 95% Confidence Interval		***** Increase**	***** Increase**	***** Decrease**	***** Decrease**					
Total - 1995 - Stocking Class	18.4	762.9	3,974.7	10,481.1	1,715.0	16,952.1				
1995 Estimate's 95% Confidence Interval	0 - 38	626 - 900	3,696 - 4,253	10,146 - 10,816	1,519 - 1,911	16,817 - 17,088				

[1] The determination of forest type group for the 1999 data uses both of the new stocking and stand size algorithms, and therefore has no correspondence to the algorithms and methods used in classifying this variable in 1995. The USFS will eventually provide a restatement of the 1995 data based on the current algorithms Pending that revision the testing of statistical differences, by forest type group, is suspended for this Table.

Table 12: Area of Timberland by Forest Type Group and Basal Area Class, Maine, 1999
(Basal Area of All Live Trees (1.0"+) are used in the assignment of class)
(In Thousands of acres, using 1995 Classification Algorithms)

Forest Type Group	Basal Area Class (square feet per acre)					Forest Type Group Total	1999 Estimate's 95% C.I.	[1]	1995 Estimate's Total	1995 Estimate's 95% C.I.
	0 - 49	50 - 99	100 - 149	150 - 199	200+					
White/Red/Jack Pine	65.1	237.3	339.5	359.9	201.9	1,203.6	1,074 - 1,333	**N/A**	1,173.0	1,009 - 1,337
Spruce/Fir	1,025.9	1,368.3	1,554.4	1,144.5	299.3	5,392.4	5,152 - 5,632	**N/A**	5,483.8	5,199 - 5,769
Loblolly/Shortleaf	-	-	-	-	-	-			6.7	0 - 20
Oak/Pine	39.4	137.6	237.4	143.9	22.9	581.2	487 - 675	**N/A**	189.2	119 - 259
Oak/Hickory	40.8	145.3	367.0	99.4	-	652.4	587 - 718	**N/A**	262.4	179 - 345
Elm/Ash/Red Maple	214.1	207.6	122.3	91.7	40.8	676.5	606 - 747	**N/A**	404.7	299 - 510
Maple/Beech/Birch	968.7	2,325.9	2,799.2	366.1	65.9	6,525.8	6,292 - 6,760	**N/A**	6,907.3	6,603 - 7,211
Aspen/Birch	845.3	542.5	580.5	339.4	17.5	2,325.2	2,159 - 2,491	**N/A**	2,525.0	2,293 - 2,757
Total - All Groups	3,199.3	4,964.5	6,000.2	2,544.9	648.2	17,357.1				
95% Confidence Interval	2,961 - 3,438	4,806 - 5,123	5,803 - 6,198	2,409 - 2,681	515 - 782	16,936 - 17,778				
Significantly Different at the 95% Confidence Interval	***** Increase**									
Total - 1995 - Basal Area Class	2,571.5	4,536.4	6,420.0	2,906.6	517.6	16,952.1				
1995 Estimate's 95% Confidence Interval	2,350 - 2,793	4,237 - 4,836	6,099 - 6,741	2,657 - 3,157	404 - 631	16,817 - 17,088				

[1] The determination of forest type group for the 1999 data uses both of the new stocking and stand size algorithms, and therefore has no correspondence to the algorithms and methods used in classifying this variable in 1995. The USFS will eventually provide a restatement of the 1995 data based on the current algorithms Pending that revision the testing of statistical differences, by forest type group, is suspended for this Table.

Table 13: Number of Trees (5.0+ inches DBH) on Timberland by Species/Species Group and Tree Class, Maine, 1999
(In Thousands of trees)

Species/Species Group	Tree Class					
	Preferred	Acceptable	All Growing Stock	Rough Cull	Rotten Cull	All Live
Balsam Fir	31,215	345,581	376,796	8,060	2,922	387,778
Spruces	89,635	372,403	462,038	13,176	920	476,134
Eastern White Pine	5,565	134,599	140,164	9,229	287	149,680
Northern White Cedar	17,987	240,327	258,314	16,076	28,537	302,927
Other Misc. Softwoods	8,177	137,719	145,896	14,648	2,341	162,885
Sub-Total All Softwoods	152,579	1,230,629	1,383,208	61,189	35,007	1,479,404
Red Maple	2,264	295,060	297,324	27,939	14,907	340,170
Sugar Maple/Beech/Y. Birch	5,820	367,244	373,064	56,321	22,053	451,438
Intolerant Hardwoods	7,244	254,557	261,801	12,981	4,254	279,036
Other Misc. Comm. Hardwoods	3,058	99,748	102,806	8,484	1,279	112,569
All Noncommercial Hardwoods	184	29,928	30,112	10,140	6,402	46,654
Sub-Total All Hardwoods	18,570	1,046,537	1,065,107	115,865	48,895	1,229,867
Unknown	-	-	-	-	-	-
Grand Total - All Species	171,149	2,277,166	2,448,315	177,054	83,902	2,709,271
95% Confidence Interval	140,896 - 201,364	2,155,014 - 2,398,844	2,288,882 - 2,607,748	162,420 - 191,654	75,118 - 92,670	2,536,465 - 2,882,077
Significantly Different at the 95% Confidence Interval	***** Increase**	***** Decrease**	***** Decrease**	***** Increase**		***** Decrease**
Total - 1995 - Tree Class	68,282	2,718,292	2,786,575	149,692	88,526	3,024,793
1995 Estimate's 95% Confidence Interval	61,863 - 74,701	2,653,053 - 2,783,531	2,719,697 - 2,853,453	141,309 - 158,075	82,329 - 94,723	2,958,248- 3,091,338

Species/Species Group	Tree Class		Species/Species Group Total	1999 Estimate's 95% C.I.	Significantly Different at the 95% C.I.	1995 Estimate's Total	1995 Estimate's 95% C.I.
	Dead	Snags					
Balsam Fir	14,346	124,970	527,094	474,112 - 580,076	***** Decrease**	656,915	622,755 - 691,075
Spruces	11,852	26,858	514,844	439,028 - 590,660		547,787	490,317 - 605,257
Eastern White Pine	6,857	19,431	175,968	127,268 - 224,668		162,589	140,152 - 185,026
Northern White Cedar	15,544	31,322	349,793	283,022 - 416,564		387,809	349,028 - 426,590
Other Misc. Softwoods	6,028	9,274	178,187	147,121 - 209,253		202,285	166,448 - 238,122
Sub-Total All Softwoods	54,627	211,855	1,745,702	1,594,035 - 1,897,369		1,957,385	1,886,919 - 2,027,851
Red Maple	4,641	22,033	366,844	329,904 - 403,784	***** Decrease**	437,264	412,777 - 461,751
Sugar Maple/Beech/Y. Birch	9,919	36,667	498,024	433,999 - 562,049		513,609	468,084 - 559,142
Intolerant Hardwoods	9,321	37,971	326,328	280,214 - 372,442		386,217	345,318 - 427,116
Other Misc. Comm. Hardwoods	3,337	6,207	122,113	103,082 - 141,144	***** Decrease**	173,227	138,603 - 207,851
All Noncommercial Hardwoods	4,307	11,247	62,208	51,106 - 73,310		68,218	57,111 - 79,325
Sub-Total All Hardwoods	31,525	114,125	1,375,517	1,198,305 - 1,481,297	***** Decrease**	1,578,535	1,528,022 - 1,629,048
Unknown	-	184	184				
Grand Total - All Species	86,152	326,164	3,121,587				
95% Confidence Interval	78,326 - 93,964	305,368 - 346,890	2,928,238 - 3,314,936				
Significantly Different at the 95% Confidence Interval		***** Decrease**	***** Decrease**				
Total - 1995 - Tree Class	84,706	426,423	3,535,923				
1995 Estimate's 95% Confidence Interval	78,777 - 90,635	407,660 - 445,186	3,458,133 - 3,613,713				

Table 14: Number of Growing Stock Trees (5.0+ inches DBH) on Timberland by Species/Species Group and Diameter Class Grouping, Maine, 1999
(In Thousands of trees)

	Diameter Class Grouping (inches at breast height)							
	Poletimber	**Small Sawtimber**	**Large Sawtimber**	Species/Species Group	1999 Estimate's	**Significantly Different**	1995 Estimate's	1995 Estimate's
Species/Species Group	5.0 - 8.9	9.0 - 14.9	15.0 +	Total All Classes	95% C.I.	**at the 95% C.I.**	Total	95% C.I.
Balsam Fir	328,815	47,613	368	376,796	334,673 - 418,919		437,365	410,248 - 464,482
Spruces	333,671	119,459	8,907	462,037	393,355 - 530,719		484,718	432,165 - 537,271
Eastern White Pine	74,485	43,617	22,062	140,164	103,084 - 177,244		141,538	121,440 - 161,636
Northern White Cedar	163,055	85,873	9,386	258,314	206,044 - 310,584		289,649	257,788 - 321,510
Other Misc. Softwoods	86,340	49,674	9,882	145,896	118,835 - 172,957		176,250	144,030 - 208,470
Sub-Total All Softwoods	986,366	346,236	50,605	1,383,207	1,260,841 - 1,505,573		1,529,520	1,471,398 - 1,587,642
	5.0 - 10.9	11.0 - 14.9	15.0 +					
Red Maple	256,930	31,106	9,287	297,323	266,795 - 327,851	***** Decrease**	365,314	344,151 - 386,531
Sugar Maple/Beech/Yellow Birch	293,834	53,355	25,875	373,064	323,264 - 422,864		412,012	373,682 - 450,400
Intolerant Hardwoods	225,630	28,369	7,801	261,800	222,357 - 301,243		321,606	285,359 - 357,899
Other Misc. Comm. Hardwoods	85,784	12,722	4,301	102,807	85,978 - 119,636		137,309	61,338 - 95,716
Sub-Total All Hardwoods	862,178	125,552	47,264	1,034,994	950,247 - 1,119,741	***** Decrease**	1,236,241	1,194,209 - 1,278,273
Grand Total - All Species	1,848,544	471,788	97,869	2,418,201				
1999 Estimate's 95% Confidence Interval	1,745,104 - 1,951,984	437,639 - 505,937	88,741 - 106,997	2,259,893 - 2,576,509				
Significantly Different at the 95% Confidence Interval	***** Decrease**			***** Decrease**				
Total - 1995 - DBH Class	2,143,269	520,739	101,728	2,765,763				
1995 Estimate's 95% Confidence Interval	2,078,582 - 2,207,956	439,694 - 601,784	92,517 - 110,939	2,699,385 - 2,832,141				

Table 16: Number of Live Trees (1.0+ inches DBH) on Timberland by Species/Species Group and Diameter Class Grouping, Maine, 1999
(In Thousands of trees)

	Diameter Class (inches at breast height)				Species/Species Group Total - 5.0+		Species/Species Group Total - All Classes	
					1999	*1995*	1999	*1995*
	Saplings	Poletimber	Small Sawtimber	Large Sawtimber				
Species/Species Group	1.0 - 4.9	5.0 - 8.9	9.0 - 14.9	15.0 +	Estimates	*Estimate's*	Estimates	*Estimate's*
Balsam Fir	5,293,911	337,088	49,954	736	387,778	*445,807*	5,681,689	*4,835,648*
Spruces	1,442,862	338,394	127,493	10,247	476,134	*493,722*	1,918,996	*1,700,858*
Eastern White Pine	231,626	78,867	47,836	22,978	149,681	*149,203*	381,307	*382,782*
Northern White Cedar	339,479	186,636	103,371	12,921	302,928	*340,029*	642,407	*724,232*
Other Misc. Softwoods	350,134	90,884	60,382	11,618	162,884	*187,329*	513,018	*520,688*
Sub-Total All Softwoods	7,658,012	1,031,869	389,036	58,500	1,479,405		9,137,417	
1995 Estimate's	*6,548,117*	*1,126,547*	*427,703*	*61,840*		*1,616,090*		*8,164,208*
		5.0 - 10.9	11.0 - 14.9					
Red Maple	1,488,926	292,284	36,439	11,446	340,169	*405,579*	1,829,095	*1,925,650*
Sugar Maple/Beech/Yellow Birch	1,870,486	352,758	67,099	31,580	451,437	*465,074*	2,321,923	*2,247,611*
Intolerant Hardwoods	1,301,011	240,737	29,888	8,411	279,036	*333,274*	1,580,047	*1,863,494*
Other Misc. Comm. Hardwoods	425,083	94,834	12,963	4,772	112,569	*154,577*	537,652	*862,401*
All Noncommercial Hardwoods	1,302,312	45,836	552	267	46,655	*50,198*	1,348,967	*1,353,302*
Sub-Total All Hardwoods	6,387,818	1,026,449	146,941	56,476	1,229,866		7,617,684	
1995 Estimate's	*6,843,755*	*1,183,583*	*166,581*	*58,537*		*1,408,702*		*8,252,458*
Grand Total - All Species	14,045,830	2,058,318	535,977	114,976	2,709,271		16,755,101	
1995 Estimate's	*13,391,872*	*2,549,621*	*594,284*	*120,377*		*3,024,792*		*16,416,666*

Table 19: Net Volume of Growing Stock Trees (5.0+ inches DBH) on Timberland by Species/Species Group and Diameter Class Grouping, Maine, 1999
(In Millions of Cubic Feet)

	Diameter Class Grouping (inches at breast height)							
	Poletimber	**Small Sawtimber**	**Large Sawtimber**	Species/Species Group	1999 Estimate's	**Significantly Different**	1995 Estimate's	1995 Estimate's
Species/Species Group	5.0 - 8.9	9.0 - 14.9	15.0 +	Total All Classes	95% C.I.	**at the 95% C.I.**	Total	95% C.I.
Balsam Fir	1,406.3	755.3	15.6	2,177.3	1,903 - 2,451		2,184.6	2,027 - 2,342
Spruces	1,699.2	2,143.8	400.3	4,243.3	3,621 - 4,866		3,946.4	3,538 - 4,355
Eastern White Pine	434.6	880.2	1,381.9	2,696.7	2,128 - 3,265		2,068.7	1,791 - 2,346
Northern White Cedar	715.5	1,080.8	320.4	2,116.7	1,700 - 2,534		1,937.9	1,729 - 2,147
Other Misc. Softwoods	395.3	800.4	443.4	1,639.1	1,335 - 1,944		1,544.1	1,263 - 1,826
Sub-Total All Softwoods	4,650.9	5,660.6	2,561.6	12,873.1	11,672 - 14,074		11,681.7	11,191 - 12,172
	5.0 - 10.9	11.0 - 14.9	15.0 +					
Red Maple	1,623.1	706.1	405.3	2,734.5	2,409 - 3,060		2,328.0	2,179 - 2,477
Sugar Maple/Beech/Yellow Birch	1,605.9	953.7	1,118.8	3,678.4	3,124 - 4,233		3,452.5	3,101 - 3,804
Intolerant Hardwoods	1,539.6	637.8	303.0	2,480.4	2,104 - 2,857		2,326.9	2,059 - 2,595
Other Misc. Comm. Hardwoods	568.2	252.9	212.8	1,034.0	841 - 1,227		1,033.6	828 - 1,239
Sub-Total All Hardwoods	5,336.9	2,550.5	2,039.9	9,927.3	9,043 - 10,812		9,141.0	8,794 - 9,488
Grand Total - All Species	9,987.8	8,211.1	4,601.5	22,800.4				
1999 Estimate's 95% Confidence Interval	9,420 - 10,556	7,654 - 8,769	4,102 - 5,101	21,353 - 24,248				
Significantly Different at the 95% Confidence Interval			***** Increase**					
Total - 1995 - DBH Class	9,625.1	7,526.4	3,671	20,822.7				
1995 Estimate's 95% Confidence Interval	9,307 - 9,943	6,527 - 8,526	3,266 - 4,076	20,281 - 21,364				

Table 20: Net Volume of Growing Stock Trees on Timberland by Forest Type Group and Stand Size Class, Maine, 1999
(In Millions of Cubic Feet, using revised 1995 Classification Algorithms)

	Stand Size Class								
Forest Type Group	Large Diameter	Medium Diameter	Small Diameter	Non Stocked	Forest Type Group Total	1999 Estimate's 95% C.I.	[1]	1995 Estimate's Total	1995 Estimate's 95% C.I.
White/Red/Jack Pine Group	2,408.0	447.2	14.1	-	2,869.3	2,400 - 3,338	**N/A**	2,550.8	2,148 - 2,954
Spruce/Fir Group	4,359.4	2,171.5	496.7	-	7,027.6	6,154 - 7,901	**N/A**	6,995.1	6,505 - 7,485
Loblolly/Shortleaf Group	-	-	-	-	-		**N/A**	18.8	0 - 56
Oak/Pine Group	592.2	344.4	21.4	-	958.1	666 - 1,250	**N/A**	246.8	138 - 356
Oak/Hickory Group	378.2	591.3	7.6	-	977.1	749 - 1,205	**N/A**	313.3	202 - 424
Elm/Ash/Red Maple Group	434.7	76.8	125.9	-	637.5	339 - 936	**N/A**	234.2	149 - 319
Maple/Beech/Birch Group	4,373.7	3,382.4	307.1	-	- 8,063.2	7,349 - 8,778	**N/A**	8,283.1	7,819 - 8,747
Aspen/Birch Group	356.7	1,655.4	255.5	-	2,267.6	1,779 - 2,757	**N/A**	2,180.5	1,884 - 2,477
Total - All Forest Types	12,903.0	8,669.0	1,228.4	-	22,800.4				
95% Confidence Interval	12,047 - 13,759	8,003 - 9,335	1,023 - 1,433		21,351 - 24,245				
Significantly Different at the 95% Confidence Interval	***Increase**								
Total - 1995 - Stand Size Class	10,474.5	9,180.3	1,167.6	0.3	20,822.7				
1995 Estimate's 95% Confidence Interval	9,825 - 11,124	8,685 - 9,676	1,046 - 1,289	0 - 1	20,281 - 21,364				

[1] The determination of forest type group for the 1999 data uses both of the new stocking and stand size algorithms, and therefore has no correspondence to the algorithms and methods used in classifying this variable in 1995. The USFS will eventually provide a restatement of the 1995 data based on the current algorithms Pending that revision the testing of statistical differences, by forest type group, is suspended for this Table.

Table 21: Net Volume of Growing Stock Trees on Timberland by Species/Species Group and Stand-Size Class, Maine, 1999
(In Millions of Cubic Feet, using revised 1995 Classification Algorithms)

	Stand-Size Class								
Species/Species Group	Large Diameter	Medium Diameter	Small Diameter	Non-Stocked	Species/Species Group Total	1999 Estimate's 95% C.I.	Significantly Different at the 95% C.I.	1995 Estimate's Total	1995 Estimate's 95% C.I.
Balsam Fir	1,028.6	933.9	214.7	-	2,177.3	1,903 - 2,451		2,184.6	2,027 - 2,341
Spruces	2,454.4	1,487.2	301.7	-	4,243.3	3,621 - 4,866		3,946.4	3,538 - 4,355
Eastern White Pine	2,000.4	624.5	71.7	-	2,696.7	2,128 - 3,265		2,068.7	1,791 - 2,346
Northern White Cedar	1,297.0	666.0	153.7	-	2,116.7	1,700 - 2,534		1,937.9	1,729 - 2,147
Other Misc. Softwoods	1,091.3	467.5	80.2	-	1,639.1	1,335 - 1,944		1,544.1	1,263 - 1,826
Sub-Total All Softwoods	7,871.8	4,179.3	822.0	-	12,873.0	11,672 - 14,074		11,681.7	11,191 - 12,172
Red Maple	1,332.3	1,266.0	136.2	-	2,734.5	2,409 - 3,060		2,328.0	2,179 - 2,477
Sugar Maple/Beech/Yellow Birch	2,334.1	1,236.6	107.8	-	3,678.4	3,124 - 4,233		3,452.5	3,101 - 3,804
Intolerant Hardwoods	804.5	1,545.5	130.4	-	2,480.4	2,104 - 2,857		2,326.9	2,059 - 2,595
Other Misc. Comm. Hardwoods	560.3	441.7	32.0	-	1,034.0	841 - 1,227		1,033.6	828 - 1,239
Sub-Total All Hardwoods	5,031.2	4,489.8	406.4	-	9,927.3	9,043 - 10,812		9,141.0	8,794 - 9,488
Grand Total - All Species	12,903.0	8,669.0	1,228.4	-	22,800.4				
95% Confidence Interval	12,046 - 13,757	8,003 - 9,334	1,023 - 1,433		21,353 - 24,248				
Significantly Different at the 95% Confidence Interval	***Increase**								
Total - 1995 - Stand Size Class	10,474.5	9,180.3	1,167.6	0.3	20,822.7				
1995 Estimate's 95% Confidence Interval	9,825 - 11,124	8,685 - 9,676	1,046 - 1,289	0 - 1	20,281 - 21,364				

Table 23: Net Volume of All Live, Commercial Tree Species, Pulpwood Quality, Growing Stock, and Sawtimber Trees on Timberland by Species Group and Ownership Class, Maine, 1999

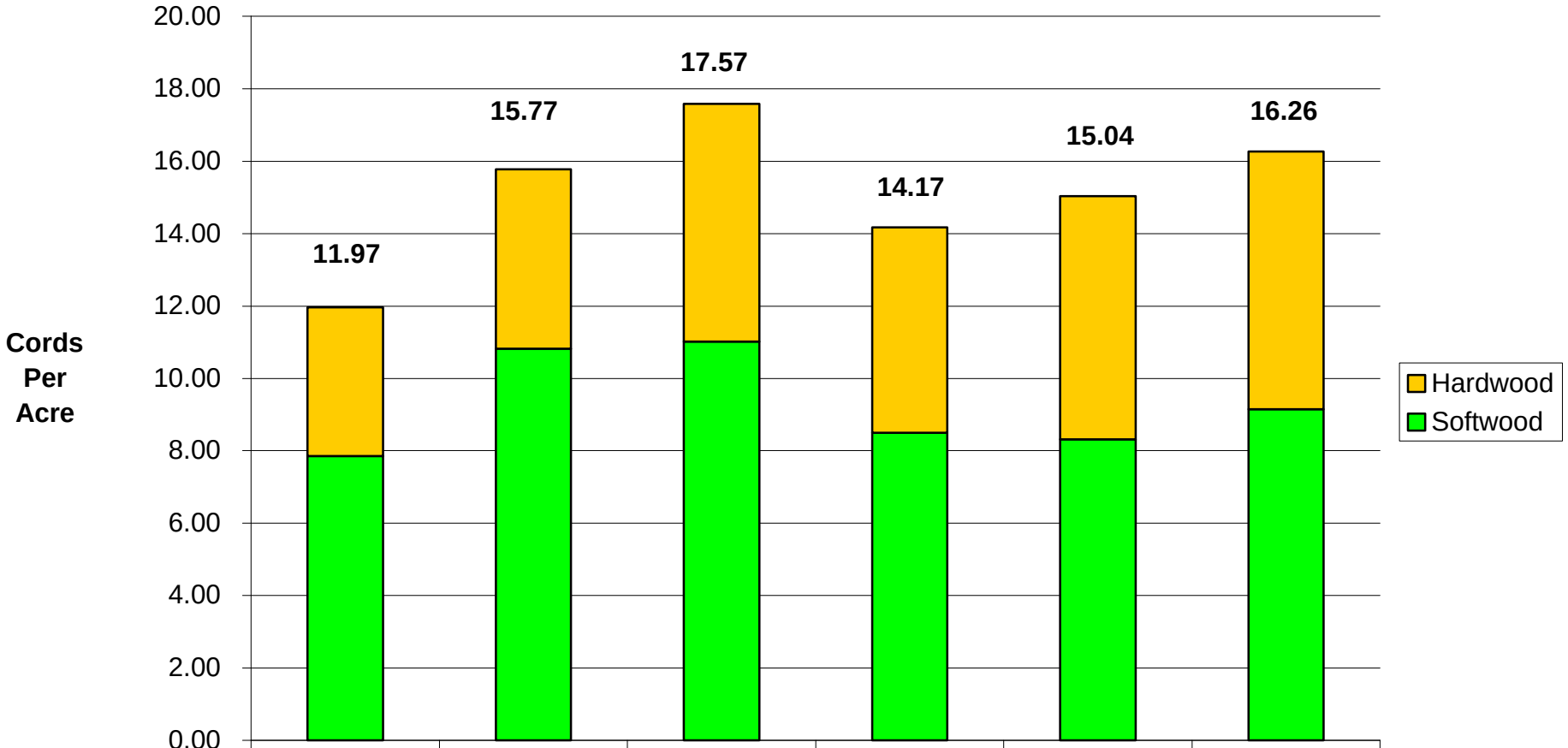
Species Group	Ownership Class: Public Ownership	Ownership Class: Forest Industry	Ownership Class: Non-Industrial Private	All Classes Total	1999 Estimate's 95% C.I.	Significantly Different at the 95% C.I.	1995 Estimate's Total	1995 Estimate's 95% C.I.
All Live:		**(In Millions of Cubic Feet)**						
Softwoods	806.6	5,071.8	7,698.0	13,576.3	12,330 - 14,823		12,083.4	11,576 - 12,591
Hardwoods	784.3	3,960.5	6,091.0	10,835.8	9,901 - 11,771		9,874.3	9,519 - 10,230
Total - All Live	1,590.9	9,032.3	13,789.0	24,412.2	22,907 - 25,917	*** Increase	21,957.7	21,387 - 22,529
Commercial Tree Species:		**(In Millions of Cubic Feet)**						
Softwoods	806.6	5,071.8	7,698.0	13,576.3	12,330 - 14,823			
Hardwoods	774.8	3,920.2	6,001.7	10,696.6	9,765 - 11,628			
Total - Commercial Trees	1,581.4	8,991.9	13,699.6	24,273.0	22,772 - 25,774	*** Increase	21,890.1	21,262 - 22,517
Pulpwood Quality:		**(In Millions of Cubic Feet)**						
Softwoods	804.3	5,027.4	7,654.0	13,485.7	12,249 - 14,723	N/A	11,986.3	
Hardwoods	757.4	3,836.3	5,914.6	10,508.3	9,590 - 11,426	N/A	9,678.2	
Total - Pulpwood Quality	1,561.7	8,863.7	13,568.6	23,993.9	22,505 - 25,483	*** Increase	21,597.0	20,998 - 22,195
Growing Stock:		**(In Millions of Cubic Feet)**						
Softwoods	770.1	4,918.8	7,184.2	12,873.0	11,672 - 14,074		11,681.6	11,190 - 12,171
Hardwoods	698.7	3,603.3	5,625.3	9,927.3	9,043 - 10,812		9,141.1	8,794 - 9,488
Total - Growing Stock	1,468.8	8,522.0	12,809.5	22,800.4	21,353 - 24,248		20,822.7	20,281 - 21,364
Sawtimber:		**(In Millions of Board Feet)**						
Softwoods	1,938.4	10,947.4	18,826.6	31,712.5	27,832 - 35,593		29,858.2	28,186 - 31,530
Hardwoods	2,040.4	7,938.1	10,332.1	20,310.5	17,640 - 22,981		17,106.7	16,080 - 18,133
Total - Sawtimber	3,978.8	18,885.5	29,158.7	52,023.0	47,313 - 56,733		46,964.9	45,086 - 48,843

Table 27: Net Volume of Sawtimber Trees (9.0+ inches DBH) on Timberland by Species/Species Group and Diameter Class Grouping, Maine, 1999
(In Millions of Cubic Feet)

	Small Sawtimber	Large Sawtimber					
	Diameter Class (inches at breast height)		Species/Species Group	1999 Estimate's	Significantly Different	1995 Estimate's	1995 Estimate's
Species/Species Group	9.0 - 14.9	15.0+	Total All Classes	95% C.I.	at the 95% C.I.	Total	95% C.I.
Balsam Fir	2,887.5	70.2	2,957.7	2,259 - 3,656		2,960.1	2,617 - 3,303
Spruces	8,204.4	1,766.7	9,971.2	8,162 - 11,781		10,038.3	8,859 - 11,218
Eastern White Pine	3,460.7	6,787.7	10,248.4	7,917 - 12,580		8,160.8	6,986 - 9,336
Northern White Cedar	3,092.3	1,120.0	4,212.3	3,055 - 5,370		4,154.3	3,656 - 4,653
Other Misc. Softwoods	2,622.1	1,700.8	4,322.9	3,356 - 5,289		4,544.7	3,668 - 5,458
Sub-Total All Softwoods	20,267.0	11,445.5	31,712.5	27,832 - 35,593		29,858.2	28,186 - 31,530
	11.0 - 14.9						
Red Maple	2,897.2	1,885.5	4,782.7	3,735 - 5,831		3,537.7	3,149 - 3,927
Sugar Maple/Beech/Yellow Birch	4,047.4	5,225.3	9,272.7	7,348 - 11,198		10,410.6	9,016 - 11,806
Intolerant Hardwoods	2,756.5	1,452.2	4,208.7	3,272 - 5,145		3,326.0	2,787 - 3,865
Other Misc. Comm. Hardwoods	1,058.1	988.3	2,046.4	1,410 - 2,683		1,986.4	1,425 - 2,548
Sub-Total All Hardwoods	10,759.1	9,551.4	20,310.5	17,640 - 22,981		17,105.5	16,079 - 18,132
Grand Total - All Species	31,026.1	20,996.9	52,023.0				
1999 Estimate's 95% Confidence Interval	28,903 - 33,150	18,608 - 23,386	47,313 - 56,733				
Significantly Different at the 95% Confidence Interval							
Total - 1995 - DBH Class	29,637.4	17,326.3	46,963.7				
1995 Estimate's 95% C.I.	28,189 - 31,086	15,316 - 19,336	45,805 - 48,842				

APPENDIX B.

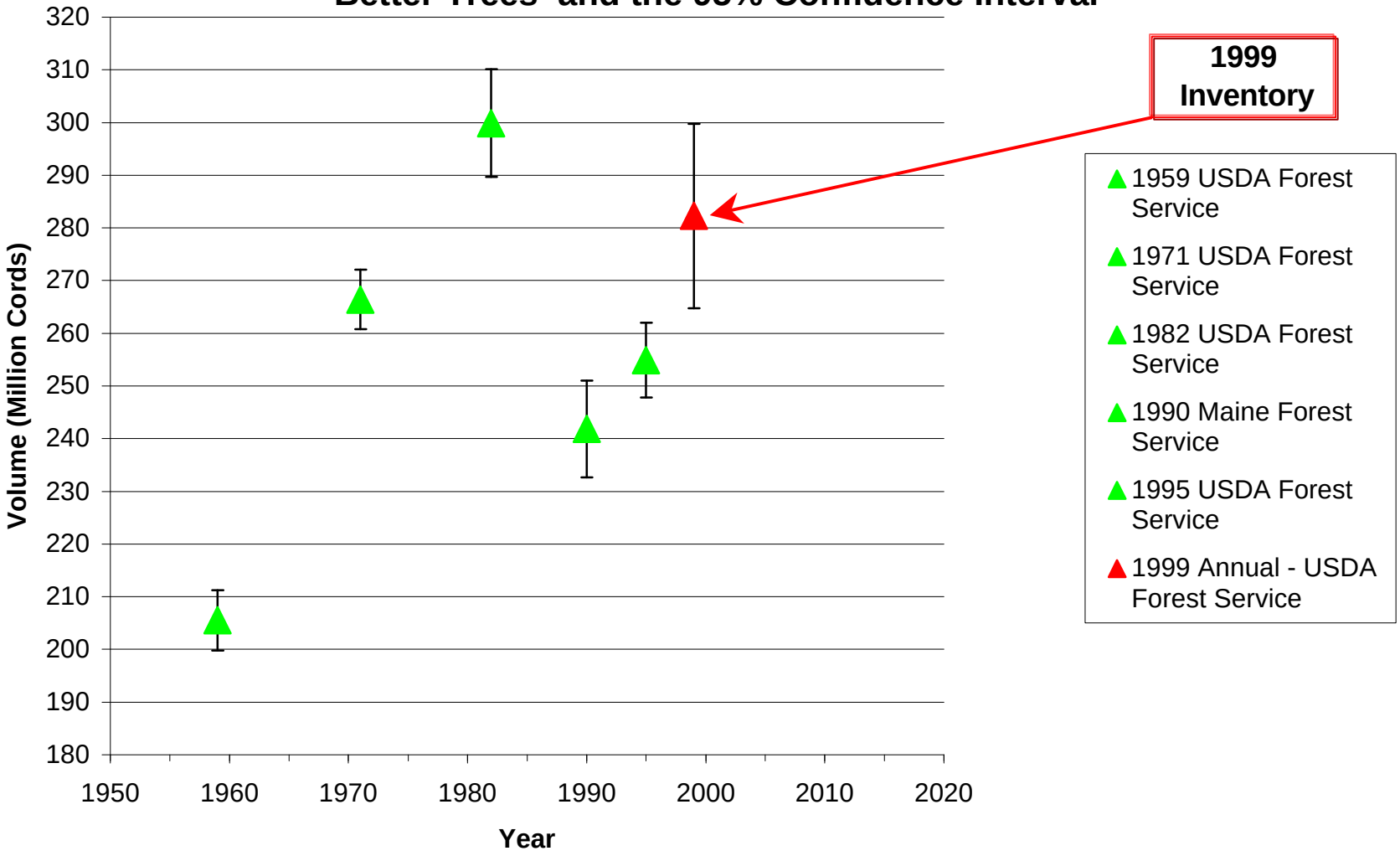
Appendix B. Figure 1. - Volume per Acre of Pulpwood Quality or Better Trees[1], by Inventory Year



	1959 USDA Forest Service	1971 USDA Forest Service	1982 USDA Forest Service	1990 Maine Forest Service	1995 USDA Forest Service	1999 USDA Forest Service
Hardwood	4.11	4.95	6.56	5.67	6.72	7.12
Softwood	7.86	10.82	11.01	8.50	8.32	9.14

[1] Pulpwood Quality or Better Trees contain the Tree Classes of Growing Stock and Rough Culll

Appendix B. Figure 2. - Volume Estimates of Pulpwood Quality or Better Trees[1] and the 95% Confidence Interval



[1] Pulpwood Quality or Better Trees contain the Tree Classes of Growing Stock and Rough Cull